



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,187	10/12/2001	Joseph V. Simmons	3201.2.1	1417

28049 7590 03/02/2006

PATE PIERCE & BAIRD
215 SOUTH STATE STREET, SUITE 550
PARKSIDE TOWER
SALT LAKE CITY, UT 84111

EXAMINER

THANGAVELU, KANDASAMY

ART UNIT PAPER NUMBER

2123

DATE MAILED: 03/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/976,187

Applicant(s)

SIMMONS ET AL.

Examiner

Kandasamy Thangavelu

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2005 and 23 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 55-81 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 55-81 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is in response to the Applicants' Response mailed on December 22, 2005 and January 23, 2006. Claims 31-54 were canceled. Claims 55 – 81 were added. Claims 55-81 of the application are pending. This office action is made non-final.

Drawings

2. The drawings submitted on December 22, 2005 for Fig. 20 is accepted.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. §112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 57 and 69 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Art Unit: 2123

4.1 Claim 57 states in part, “the input module and user interface module are configured to interface with the design module substantially independently from one another”.

The use of the term, “to interface with the design module substantially independently from one another” appears to be incorrect since the user interface module is part of the input module as shown in Fig. 2 and Fig. 13; all inputs provided by the user through the user interface module will be validated by the input module before appropriate action is taken by the input module.

4.2 Claim 69 states in part, “a compensation module configured to identify monetary compensation due to a user from vendors”. The description of the compensation module appears to be incorrect. Specification Page 4, Para 2, Lines 1-3, state “a business may be credited financially for providing software to a user who subsequently uses the software to make a purchasing decision”. This implies that compensation will be paid by a user to vendors of the products.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 72-74 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 2123

Claim 72, Line 1, recites the limitation "the product module further comprises ". There is insufficient antecedent basis for "the product module" in the claim.

Claim 73, Line 1, recites the limitation "the product module further comprises ". There is insufficient antecedent basis for "the product module" in the claim.

Claim 74, Line 1, recites the limitation "the user interface further comprises". There is insufficient antecedent basis for "the user interface" in the claim.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

8. Claims 55-60 and 71 are rejected under 35 U.S.C. § 102(e) as being anticipated by **Hall et al.** (U.S. Patent 6,651,037).

8.1 **Hall et al.** teaches Method of optimizing design of an HVAC air-conditioning assembly for a climate control system. Specifically as per claim 55, **Hall et al.** teaches a computer-

Art Unit: 2123

readable medium storing a computer program for designing an HVAC system (Abstract; Fig. 1; Fig. 6, Item 1010; CL1, L8-11; CL8, L42-52), the computer program comprising:

an input module configured to receive inputs corresponding to design elements, characterized by properties stored in records, the design elements being connectable to establish an HVAC system to be designed (CL4, L1-4; CL4, L52-67);

a design module operably connected to the input module and configured to operate on the inputs to create the records reflecting the properties of the design elements and interactions thereof to establish a design of the HVAC system (Fig. 1; CL3, L50 to CL4, L4);

the input module and design module, further configured to automatically provide multiple schematic representations of a selected design element, selected from the design elements, the multiple schematic representations reflecting distinct operational contexts of the selected design element (Fig. 1; CL3, L50 to CL4, L4; Fig. 5, Item 240; CL4, L18-33; CL5, L44-47; CL7, L1-2); and to automatically maintain substantially complete and consistent information in the records, describing the properties of the selected design element in each of the distinct operational contexts (Fig. 1; CL3, L50 to CL4, L4; CL4, L18-33; CL5, L44-47; CL7, L1-2); and

an output module configured to provide a user-interpretable output corresponding to the HVAC system (CL4, L50-52; CL5, L13-16).

Per claim 56: **Hall et al.** teaches that the computer program further comprises a user interface module configured to receive inputs from a user to control selection, relative positioning, and properties of design elements of the HVAC system to be designed (CL4, L1-4; CL4, L52-67);

Art Unit: 2123

and configured to output to a user a graphical representation of the HVAC system reflecting the selection, relative positioning, and properties of the design elements (CL4, L18-33; Fig. 5, Item 240; CL4, L50-52).

Per claim 57: **Hall et al.** teaches that the input module and user interface module are configured to interface with the design module substantially independently from one another (CL4, L1-4; CL4, L52-67).

Per claim 58: **Hall et al.** teaches that the input module further comprises a user interface module configured to receive inputs from a user to control selection, relative positioning, and properties of design elements of the HVAC system (CL4, L1-4; CL4, L52-67); and

output to a user a graphical representation of the HVAC system reflecting the selection, relative positioning, and properties of the design elements (CL4, L18-33; Fig. 5, Item 240; CL4, L50-52).

Per claim 59: **Hall et al.** teaches that the operational contexts are selected from mass transport and energy transport (CL7, L50-56).

Per claim 60: **Hall et al.** teaches that mass transport includes at least one of air transport and water transport, and wherein energy transport includes at least one of heating and cooling with respect to the selected design element (CL7, L50-56).

Art Unit: 2123

8.2 As per claim 71, **Hall et al.** teaches the computer-readable medium of claim 55. **Hall et al.** teaches that the output module is further configured to do at least one of generating reports, drawing schematic illustrations, providing schedules of components, and providing performance analyses reflecting the design elements (CL4, L50-52; CL5, L13-1; CL4, L18-27).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 61-65 and 72-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hall et al.** (U.S. Patent 6,651,037) in view of **Harrington** (U.S. Patent 5,895,454).

Art Unit: 2123

11.1 As per claim 61, **Hall et al.** teaches the computer-readable medium of claim 55. **Hall et al.** does not expressly teach that the selected design element comprises a product available from a vendor, independent from the article, the product characterized by product properties corresponding thereto; and the design module further comprises a specification module, executable to assign the product properties as the properties of the selected design element. **Harrington** teaches that the selected design element comprises a product available from a vendor, independent from the article, the product characterized by product properties corresponding thereto (Abstract, L1-4); and the design module further comprises a specification module, executable to assign the product properties as the properties of the selected design element (Abstract, L4-7 and L10-13). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the computer-readable medium of **Hall et al.** with the computer-readable medium of **Harrington** that included the selected design element comprising a product available from a vendor, independent from the article, the product characterized by product properties corresponding thereto; and the design module further comprising a specification module, executable to assign the product properties as the properties of the selected design element, because that would allow a user with a selection of several vendor sites to select the vendor products that met the user's product/service specifications (Abstract, L5-9); and would allow the user to view, select, order and pay for products and services using the internet and remote vendor websites (CL1, L10-14).

9.2 As per claims 62-64, **Hall et al.** and **Harrington** teach the computer-readable medium of claim 61. **Hall et al.** does not expressly teach that the computer program further comprise a

product module configured to manage data reflecting the product properties; the product module further comprises an updating module configured to update the product proper; and the computer program further comprise a communication module configured to automatically establish communication between a user and the vendor of the product. **Harrington** teaches that the computer program further comprise a product module configured to manage data reflecting the product properties (Abstract, L4-7 and L10-13); the product module further comprises an updating module configured to update the product proper (Abstract, L10-13); and the computer program further comprise a communication module configured to automatically establish communication between a user and the vendor of the product (Abstract, L4-7 and L10-13).

9.3 As per claim 65, **Hall et al.** and **Harrington** teach the computer-readable medium of claim 64. **Hall et al.** does not expressly teach that the communication module is further configured to do at least one of making inquiries of the vendor, placing orders with the vendor, and downloading updated values of the product properties from the vendor. **Harrington** teaches that the communication module is further configured to do at least one of making inquiries of the vendor, placing orders with the vendor, and downloading updated values of the product properties from the vendor (Abstract, L4-17).

9.4 As per claim 72, **Hall et al.** teaches the computer-readable medium of claim 55. **Hall et al.** does not expressly teach that the product module further comprises a specification module configured to provide a detailed specification for an arbitrary number of selected design elements. **Harrington** teaches that the product module further comprises a specification module

Art Unit: 2123

configured to provide a detailed specification for an arbitrary number of selected design elements (Abstract, L4-7 and L10-13)

9.5 As per claim 73, **Hall et al.** and **Harrington** teach the computer-readable medium of claim 72. **Hall et al.** does not expressly teach that the product module further comprises product data corresponding to products available from vendors to serve as the design elements; and the specification module further comprises a filter module configured to sort the products by features thereof and priorities of the features, each selectable by a user, in order to automatically specify detailed parameters characterizing a product selected by a user to serve as the selected design element. **Harrington** teaches that the product module further comprises product data corresponding to products available from vendors to serve as the design elements (Abstract, L1-4); and the specification module further comprises a filter module configured to sort the products by features thereof and priorities of the features, each selectable by a user, in order to automatically specify detailed parameters characterizing a product selected by a user to serve as the selected design element (Abstract, L4-7 and L10-13).

Per claim 74: **Hall et al.** teaches that the user interface further comprises a selection module providing a palette of icons representing design elements selectable arbitrarily by a user and connectable to one another in a schematic work space to establish the HVAC system design (CL4, L1-2; CL4, L52-60; CL4, L61-67).

Art Unit: 2123

10. Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Hall et al.** (U.S. Patent 6,651,037) in view of **Subbarao** (U.S. Patent 6,134,511).

10.1 As per claim 66, **Hall et al.** teaches the computer-readable medium of claim 55. **Hall et al.** does not expressly teach that the computer program further comprise a load module configured to provide, to the input module HVAC loading parameters required to be accommodated by the HVAC system. **Subbarao** teaches that the computer program further comprise a load module configured to provide, to the input module HVAC loading parameters required to be accommodated by the HVAC system (CL1, L35-40; CL1, L46-48). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the computer program of **Hall et al.** with the computer program of **Subbarao** that included the data structures further comprising a load module configured to provide, to the input module HVAC loading parameters required to be accommodated by the HVAC system, because the HVAC loading parameters would provide the amount of heat to be supplied or removed to provide the specified space conditioning (CL1, L38-40), accounting for the complex details of the building, the HVAC system, weather conditions and occupancy characteristics (CL1, L46-48).

11. Claim 67 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Hall et al.** (U.S. Patent 6,651,037) in view of **Subbarao** (U.S. Patent 6,134,511), and further in view of **Pray et al.** (U.S. Patent 4,885,694).

Art Unit: 2123

11.1 As per claim 67, **Hall et al.** and **Subbarao** teach the computer-readable medium of claim 66. **Hall et al.** teaches that the data structures further comprise a CAD module configured to provide, to the input module, data reflecting a design of a vehicle interior (Abstract, L1-2; CL4, L5-12; CL7, L4-6; CL7, L32-35). **Hall et al.** and **Subbarao** do not expressly teach that the computer program further comprise a CAD module configured to provide, to the input module, data reflecting a design of an edifice to be serviced by the design of the HVAC system. **Pray et al.** teaches that the computer program further comprise a CAD module configured to provide, to the input module, data reflecting a design of an edifice to be serviced by the design of the HVAC system (CL1, L6-9; CL1, L30-45; CL3, L60-61; CL4, L50-51). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the computer program of **Hall et al.** and **Subbarao** with the computer program of **Pray et al.** that included the data structures further comprising a CAD module configured to provide, to the input module, data reflecting a design of an edifice to be serviced by the design of the HVAC system, because that would allow the computer system to automate the design of the building control system such as the HVAC system (CL1, L30-32; CL1, L6-9).

12. Claims 68-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hall et al.** (U.S. Patent 6,651,037) in view of **Subbarao** (U.S. Patent 6,134,511), and further in view of **Pray et al.** (U.S. Patent 4,885,694) and **Harrington** (U.S. Patent 5,895,454).

12.1 As per claim 68, **Hall et al.**, **Subbarao** and **Pray et al.** teach the computer-readable medium of claim 67. **Hall et al.**, **Subbarao** and **Pray et al.** do not expressly teach that the

Art Unit: 2123

computer program further comprise a product module configured to specify products available for sale and meeting requirements to be the design elements. **Harrington** teaches that the computer program further comprise a product module configured to specify products available for sale and meeting requirements to be the design elements (Abstract, L4-7 and L10-13).

12.2 As per claim 69, **Hall et al.**, **Subbarao**, **Pray et al.** and **Harrington** teach the computer-readable medium of claim 68. **Hall et al.** does not expressly teach that the computer program further comprise a compensation module configured to identify monetary compensation due to a user from vendors of the products specified as design elements in the HVAC system.

Harrington teaches that the computer program further comprise a compensation module configured to identify monetary compensation due to a user from vendors of the products specified as design elements in the HVAC system (CL1, L6-14).

12.3 As per claim 70, **Hall et al.** teaches the computer-readable medium of claim 55. **Hall et al.** teaches that the input module is further configured to interact with a CAD module provided by an independent third party to provide, to the input module, data reflecting a design of a vehicle interior (Abstract, L1-2; CL4, L5-12; CL7, L4-6; CL7, L32-35). **Hall et al.** does not expressly teach that the input module is further configured to interact with a CAD module provided by an independent third party to provide, to the input module, data reflecting a design of an edifice to be serviced by the design of the HVAC system. **Pray et al.** teaches that the input module is further configured to interact with a CAD module provided by an independent

Art Unit: 2123

third party to provide, to the input module, data reflecting a design of an edifice to be serviced by the design of the HVAC system (CL1, L6-9; CL1, L30-45; CL3, L60-61; CL4, L50-51).

Hall et al. does not expressly teach a load module configured to receive outputs from the CAD module and provide, to the input module, HVAC loading parameters required to be met by the HVAC system design. **Subbarao** teaches a load module configured to receive outputs from the CAD module and provide, to the input module, HVAC loading parameters required to be met by the HVAC system design (CL1, L35-40; CL1, L46-48).

Hall et al. does not expressly teach a vendor module, provided by an independent vendor and configured to specify products available for sale and meeting the requirements to be the design elements. **Harrington** teaches a vendor module, provided by an independent vendor and configured to specify products available for sale and meeting the requirements to be the design elements (Abstract, L4-7 and L10-13).

13. Claims 75-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hall et al.** (U.S. Patent 6,651,037) in view of **Gibino et al.** (U.S. Patent 6,179,213).

13.1 As per claim 75, **Hall et al.** teaches a method for designing an HVAC system (Abstract; Fig.1; Fig. 6, Item 1010; CL1, L8-11; CL8, L42-52), the method comprising:

providing a database having records and configured to manage values of properties corresponding to design elements corresponding to substantially all physical components and connections available for creating an HVAC system design (CL4, L1-4; CL4, L52-67);

providing a user interface configured to represent design elements arbitrarily selectable by a user and connectable to one another in a schematic to establish the HVAC system design (Fig. 1; CL3, L50 to CL4, L4; CL4, L18-33; CL4, L52-67; CL5, L44-47; CL7, L1-2);

selecting arbitrarily, from the design elements, by a user, an arbitrary number of selected design elements to be interconnected in the HVAC system design (CL4, L1-4; CL4, L52-67);

selecting, by a user, a relative location and interconnections corresponding to each arbitrary design element (CL4, L1-4; CL4, L52-6);

calculating, automatically, values of properties characterizing the arbitrary design elements (CL7, L50-56; CL7, L66 to CL8, L1);

validating correctness of the interconnections and properties (CL8, L2-15);

calculating performance parameters corresponding to the HVAC system design (CL7, L50-56; CL7, L66 to CL8, L1); and

providing drawings defining the HVAC system design for construction (CL4, L18-33; Fig. 5, Item 240; CL4, L50-52).

Hall et al. does not expressly teach providing, automatically, default values corresponding to the properties corresponding to the design elements. **Gibino et al.** teaches providing, automatically, default values corresponding to the properties corresponding to the design elements (CL2, L12-19). It would have been method of **Hall et al.** with the method of **Gibino et al.** that included providing, automatically, default values corresponding to the properties corresponding to the design elements, because that would allow providing default

Art Unit: 2123

design conditions initially, and overruling or modifying the design from default conditions when needed (CL2, L14-19).

Per claim 76: **Hall et al.** teaches creating and outputting schedules specifying each of the arbitrarily selected design elements (CL3, L64 to CL4, L4; CL4, L18-25; CL5, L13-16; CL7, L22-24).

14. Claims 77-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hall et al.** (U.S. Patent 6,651,037) in view of **Gibino et al.** (U.S. Patent 6,179,213), and further in view of **Harrington** (U.S. Patent 5,895,454).

14.1 As per claim 77, **Hall et al.** and **Gibino et al.** teach the method of claim 76. **Hall et al.** and **Gibino et al.** do not expressly teach providing a list of products and corresponding vendors meeting the performance parameters corresponding to the selected design elements. **Harrington** teaches providing a list of products and corresponding vendors meeting the performance parameters corresponding to the selected design elements (Abstract, L4-7 and L10-13).

14.2 As per claim 78, **Hall et al.**, **Gibino et al.** and **Harrington** teach the method of claim 77. **Hall et al.** does not expressly teach automatically downloading from a vendor updated lists of products and corresponding properties. **Harrington** teaches automatically downloading from a vendor updated lists of products and corresponding properties (Abstract, L4-7 and L10-13).

Art Unit: 2123

15. Claims 79-80 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hall et al.** (U.S. Patent 6,651,037) in view of **Gibino et al.** (U.S. Patent 6,179,213), and further in view of **Subbarao** (U.S. Patent 6,134,511).

15.1 As per claim 79, **Hall et al.** and **Gibino et al.** teach the method of claim 75. **Hall et al.** and **Gibino et al.** do not expressly teach obtaining, from a loads program, selected performance parameter requirements corresponding to the design elements. **Subbarao** teaches obtaining, from a loads program, selected performance parameter requirements corresponding to the design elements (CL1, L35-40; CL1, L46-48).

15.2 As per claim 80, **Hall et al.**, **Gibino et al.** and **Subbarao** teach the method of claim 79. **Hall et al.** teaches providing an input module configured to support user selection of design elements (CL4, L1-4; CL4, L52-67).

Hall et al. and **Gibino et al.** do not expressly teach interacting the input module with the loads program to provide selected inputs automatically to the input module. **Subbarao** teaches obtaining, from a loads program, selected performance parameter requirements corresponding to the design elements (CL1, L35-40; CL1, L46-48). It would have been method of **Hall et al.** and **Gibino et al.** with the method of **Subbarao** that included obtaining, from a loads program, selected performance parameter requirements corresponding to the design elements, so that would result in interacting the input module with the loads program to provide selected inputs automatically to the input module.

15.3 As per claim 81, **Hall et al.**, **Gibino et al.** and **Subbarao** teach the method of claim 80. **Hall et al.** teaches computer program further comprising a CAD module configured to provide, to the input module, data reflecting a design of a vehicle interior (Abstract, L1-2; CL4, L5-12; CL7, L4-6; CL7, L32-35). **Hall et al.** and **Gibino et al.** do not expressly teach providing a CAD program to provide inputs, corresponding to a structure to be served by the HVAC design, into the loads program. **Subbarao** teaches providing a CAD program to provide inputs, corresponding to a structure to be served by the HVAC design, into the loads program (CL1, L35-40; CL1, L46-48).

Response to Arguments

16. Applicants' arguments filed on December 22, 2005 have been fully considered. The arguments with respect to 103 (a) rejections are moot, in view of new rejections made against the new claims.

16.1 As per the applicants' argument that "none of the prior art references cited by the Examiner disclose either alone or in combination the features recited by claims 55-81; with respect to newly added independent claim 55, none of the prior art references either alone or in combination disclose "an input module and design module, further configured to automatically provide multiple schematic representations of a selected design element . . . reflecting distinct operational contexts of the selected design element"; these operational

Art Unit: 2123

contexts may include, for example, an "air handler," "air flow," or "hydronic" schematic which may represent "the transport of mass, energy, or the like"; furthermore, by "automatically providing multiple schematic representations," as required by claim 55, a "user may not be limited to placing every possible schematic representation of a component in a project"; likewise, none of the prior art cited by the Examiner either alone or in combination teaches the elements recited by newly added independent claim 75", the examiner respectfully disagrees.

Hall et al. teaches the input module and design module, further configured to automatically provide multiple schematic representations of a selected design element, selected from the design elements, the multiple schematic representations reflecting distinct operational contexts of the selected design element (Fig. 1; CL3, L50 to CL4, L4; Fig. 5, Item 240; CL4, L18-33; CL5, L44-47; CL7, L1-2); and to automatically maintain substantially complete and consistent information in the records, describing the properties of the selected design element in each of the distinct operational contexts (Fig. 1; CL3, L50 to CL4, L4; CL4, L18-33; CL5, L44-47; CL7, L1-2).

16.2 As per the applicants' argument that "with respect to newly added claim 56, Applicants' recitation that "the input module and user interface module are configured to interface with the design module substantially independently from one another" is supported in the specification; the specification states that the "input module may include a user interface module, or the user interface module may be a separate module"; Applicants assert that any objection to claim 56 based on non-disclosure in Applicants' specification or Figures is improper", the examiner respectfully disagrees.

Claim 57 states in part, "the input module and user interface module are configured to interface with the design module substantially independently from one another".

The use of the term, "to interface with the design module substantially independently from one another" appears to be incorrect since the user interface module is part of the input module as shown in Fig. 2 and Fig. 13; all inputs provided by the user through the user interface module will be validated by the input module before appropriate action is taken by the input module.

16.3 As per the applicants' argument that "the Examiner was concerned that the specification did "not describe what the components of [the] modules [were] and how they [were] connected"; in response, Applicants assert that the specification need not disclose all aspects of commonly known programming techniques to satisfy 35 U.S.C. §112, first, paragraph; there are numerous ways in which a given module may be configured to perform a particular function; once the function of a module is set forth, a programmer of ordinary skill in the art may "configure" a module to perform that function in any suitable way; according to prior case law, "the claimed invention ... is not in the details of the program writing, but in the apparatus and method whose patentability is based on the claimed combination of components or steps; the conversion of a complete thought ... into a language a machine understands is necessarily a mere clerical function to a skilled programmer"; the Examiner has withdrawn this rejection in the last Office action.

Art Unit: 2123

Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kandasamy Thangavelu whose telephone number is 571-272-3717. The examiner can normally be reached on Monday through Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez, can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC 2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'K. Thangavelu', with a large circular flourish at the end.

K. Thangavelu
Art Unit 2123
February 25, 2006